WHAT IS CLAIMED IS:

1. A nanoprobe, comprising:

a substrate having a layer, which forms a projected portion;

a plurality of conductive lines adhered to the projected portion and further extending beyond an end of the projected portion by a distance to form contact points, wherein the lines are connected to material of the projected portion to provide stiffness and the contact points provide flexibility during use.

2. The nanoprobe as recited in claim 1, wherein the layer includes a dielectric layer and the dielectric layer forms the projected portion.

3. The nanoprobe as recited in claim 2, wherein the substrate includes silicon and the dielectric layer includes at least one of silicon nitride and silicon oxide.

4. The nanoprobe as recited in claim 1, wherein the conductive lines include a thickness of between about 1% and about 10% of a thickness of the projected portion.

5. The nanoprobe as recited in claim 1, wherein the conductive lines are formed from a noble metal.

6. The nanoprobe as recited in claim 1, wherein the conductive lines are formed from one or more of Ag, Au, Pt, Ir, Ru, Pd and their alloys.

7. The nanoprobe as recited in claim 1, wherein the conductive lines each have a thickness and a width, which are 300 nm, or less.

8. The nanoprobe as recited in claim 1, wherein the conductive lines include a pitch of less than or equal to one micron.

9. The nanoprobe as recited in claim 8, wherein the pitch is less than or equal to 600 nm.

10. The nanoprobe as recited in claim 1, wherein the nanoprobe includes circuitry formed thereon.

11. A nanoprobe for making electrical measurements, comprising:

a substrate;

a dielectric layer formed on the substrate and extending beyond an edge of the substrate to form a projected portion;

a plurality of conductive lines extending at least over the projected portion, the conductive lines being adhered to the projected portion, the conductive lines further extending beyond an end of the projected portion by a distance to form contact points, wherein the lines are connected to the projected portion to provide stiffness and the contact points provide flexibility during use.

12. The nanoprobe as recited in claim 11, wherein the substrate includes silicon and the dielectric layer includes at least one of silicon nitride and silicon oxide.

13. The nanoprobe as recited in claim 11, wherein the conductive lines include a thickness of between about 1% and about 10% of a thickness of the projected portion.

14. The nanoprobe as recited in claim 11, wherein the conductive lines are formed from a noble metal.

15. The nanoprobe as recited in claim 11, wherein the conductive lines are formed from one or more of Ag, Au, Pt, Ir, Ru, Pd and their alloys.

16. The nanoprobe as recited in claim 11, wherein the conductive lines each have a thickness and a width, which are 300 nm, or less.

17. The nanoprobe as recited in claim 11, wherein the conductive lines include a pitch of less than or equal to one micron.

18. The nanoprobe as recited in claim 17, wherein the pitch is less than or equal to 600 nm.

19. The nanoprobe as recited in claim 11, wherein the nanoprobe includes circuitry formed thereon.

20. A method for fabricating a nanoprobe, comprising the steps of:

forming a dielectric layer on a substrate;

patterning conductive lines on the dielectric layer by employing lithography;

removing a portion of the dielectric layer to form a projected portion of the dielectric layer and contact fingers in areas with the conductive lines; and

removing a portion of the substrate to expose the dielectric layer over a distance.

21. The method as recited in claim 20, wherein the step of patterning conductive lines includes depositing a metal layer on the dielectric layer.

22. The method as recited in claim 21, wherein the step of depositing a metal layer includes the step of depositing a seed layer prior to depositing the metal layer.

23. The method as recited in claim 20, wherein the conductive layer includes one or more of Ag, Au, Pt, Ir, Ru, Pd and their alloys.

24. The method as recited in claim 20, wherein the step of removing a portion of the dielectric layer includes forming a hand from the dielectric layer to support the contact fingers.

25. The nanoprobe as recited in claim 1, wherein the step of patterning includes forming the conductive lines to include a thickness of between about 1% and about 10% of a thickness of the dielectric layer.

26. The method as recited in claim 20, wherein the step of patterning includes forming conductive lines each having a thickness and a width which are 300 nm or less.

27. The method as recited in claim 20, wherein the step of patterning includes forming conductive lines including a pitch of less than or equal to one micron.

28. The method as recited in claim 27, wherein the pitch is less than or equal to 600 nm.

29. The method as recited in claim 20, further comprising the step of forming circuitry on the nanoprobe.